Biofeedback and Self-Regulation

In association with the Biofeedback Society of America

Volume 3, 1978

EDITOR

Johann Stoyva, *Department of Psychiatry, University of Colorado Medical Center, Denver, Colorado*

ASSOCIATE EDITORS

Thomas H. Budzynski, *University of Colorado School of Medicine*
Mary Cook, *Midwest Research Instiute, Kansas City, Missouri*
Kenneth R. Gaarder, *Chevy Chase*
Thomas Mulholland, *Veterans Administration Hospital, Bedford, and Tufts University*
William Rickles, *VA Hospital, Sepulveda*
Gary E. Schwartz, *Yale University*
M.B. Sterman, *Sepulveda Veterans Administration Hospital and University of California at Los Angeles*

EDITORIAL BOARD

Albert F. Ax, *Nova University*
Theodore X. Barber, *The Medfield Foundation*
John Basmajian, *McMaster University School of Medicine*
Herbert Benson, *Harvard Medical School*
Niels Birbaumer, *University of Tübingen*
John Paul Brady, *University of Pennsylvania School of Medicine*
K.K. Datey, *St. George's Hospital, Bombay*
Kenneth Gaarder, *University of Texas at San Antonio*
Gordon Globus, *University of California at Irvine*
Elmer Green, *The Menninger Foundation*
Alan H. Harris, *The Johns Hopkins University School of Medicine*
Edmund Jacobson, *Laboratory for Clinical Physiology, Chicago*
Joe Kamiya, *University of California School of Medicine, San Francisco*
Wolfgang Luthe, *Montreal, Canada*
Michael J. Mahoney, *The Pennsylvania State University*
Robert B. Malmo, *MacGill University, Canada*
F.J. McGuigan, *University of Louisville Medical School*
Donald Meichenbaum, *University of Waterloo, Canada*
Neal E. Miller, *Rockefeller University*
Martin T. Orne, *Institute of the Pennsylvania Hospital and University of Pennsylvania*
David Paskewitz, *University of Maryland School of Medicine*
Erik Peper, *San Francisco State University and Albany Hospital, Albany, California*
Carol Schneider, *University of Colorado, Boulder*
David Shapiro, *University of California at Los Angeles Medical School*
Charles F. Stroebel, *Institute of Living, Hartford*
Richard S. Surwit, *Duke University Medical School*
Edward Taub, *Institute for Behavioral Research, Silver Spring*
S. Alexander Weinstock, *Columbia University*
Aubrey J. Yates, *University of Western Australia, Nedlands*
Ian Wickramasekera, *University of Illinois College of Medicine, Peoria*

EDITORIAL ASSOCIATE

Francine Butler, *University of Colorado Medical Center*

Biofeedback and Self-Regulation is published quarterly by Plenum Publishing Corporation, 227 West 17th Street, New York, N.Y. 10011. Subscription orders should be addressed to the publisher. Advertising is accepted at the discretion of the Editor; inquiries should be addressed to Francine Butler, Executive Secretary, Biofeedback Society of America, University of Colorado Medical Center, 4200 East Ninth Avenue, Denver, Colorado 80262

© 1979 Plenum Publishing Corporation.

Biofeedback and Self-Regulation participates in the program of Copyright Clearance Center, Inc. The appearance of a code line at the bottom of the first page of an article in this journal indicates the copyright owner's consent that copies of the article may be made for personal or internal use. However, this consent is given on the condition that the copier pay the stated per-copy fee through the Copyright Clearance Center, Inc. for all copying not explicitly permitted by sections 107 and 108 of the U.S. Copyright Law. It does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale, nor to the reprinting of figures, tables, and text excerpts.

Subscription Rates:
Volume 3, 1978 (4 issues) $36.00. Price for individual subscribers certifying that the journal is for their personal use, $18.00. Special rates available to members of the Biofeedback Society of America. Prices higher outside the U.S.

Printed in the USA.

Biofeedback and Self-Regulation is an interdisciplinary journal devoted to the rapid dissemination of information in this quickly growing field. The journal deals with relevant aspects of psychology, psychiatry, psychosomatic and physical medicine, and cybernetics. The following topics lie within the journal's scope: (1) biofeedback techniques in the modification of animal and human physiological activity; (2) clinical applications of biofeedback and self-regulation techniques; (3) self-control procedures evolved from behavioral therapies; (4) child development studies as they relate to self-regulation; (5) autogenic training, progressive relaxation, and related therapies; (6) scientific studies of the alteration of consciousness. Special features of the journal include an opinion forum, a section on training techniques, and book reviews. Emphasis will be given to original experimental and theoretical research, review articles, position papers, and case studies.

CONTENTS

Volume 3, Number 1 **March 1978**

ARTICLES

Biofeedback Training of 40-Hz EEG in Humans 1
Bruce L. Bird, Frederick A. Newton, Daniel E. Sheer, and Martin Ford

Behavioral and Electroencephalographic Correlates of 40-Hz EEG Biofeedback Training in Humans 13
Bruce L. Bird, Frederick A. Newton, Daniel E. Sheer, and Martin Ford

Discriminative Control of the Vaginal Vasomotor Response 29
Patricia K. Zingheim and Curt A. Sandman

Operant Conditioning of Skin Resistance Tonic Levels 43
Harry Kotses, Irma Rapaport, and Kathleen D. Glaus

Contingent vs. Noncontingent EMG Feedback and Hand Temperature in Relation to Anxiety and Locus of Control 51
Bruno Kappes and James Michaud

Biofeedback Modification of Frontal EMG in Normal Subjects 61
Yoshiteru Ohno, Yoshiharu Tanaka, Tsutomu Takeya, Hideki Matsubara, Norikazu Kuriya, and Sadao Komemushi

The Effects of Frontal EMG Biofeedback and Progressive Relaxation upon Hyperactivity and Its Behavioral Concomitants 69
Lendell Williams Braud

CASE REPORTS AND TRAINING TECHNIQUES
Treatment of Spastic Dysphonia by EMG Biofeedback 91
Thomas L. Henschen and Nancy G. Burton

METHODOLOGY
Baseline Levels in Muscle Relaxation Training 97
Robert A. Kinsman and Herman Staudenmayer

Volume 3, Number 2 **June 1978**

ARTICLES
A Comparison of the Mechanisms and Some Properties of Instructed Sudomotor and Cardiac Control 105
J. Michael Lacroix and Larry E. Roberts

Finger Pulse Amplitude and Frontalis EMG Biofeedback: Effects of Single- and Two-System Training 133
Bruce D. Naliboff and Harold J. Johnson

The Relative Effectiveness of Three Techniques to Induce the Trophotropic Response 145
Richard A. Fee and Daniel A. Girdano

Methodological Issues in Alpha Biofeedback Training 159
Sonia Ancoli and Joe Kamiya

SPECIAL SECTION
Abstracts of Papers Presented at the Ninth Annual Meeting of the Biofeedback Society of America 185
Francine Butler, Mary Cook, and Charles Graham

ANNOUNCEMENT 245

Volume 3, Number 3 **September 1978**

ARTICLES
Self-Observation and Self-Reinforcement as Sources of Self-Control in Children 247
Paul W. Clement, Eric Anderson, Jonathan Arnold, Richard Butman, John Fantuzzo, and Richard Mays

Hypertension Self-Control with a Portable Feedback Unit or Meditation–Relaxation 269
Joanne L. Hager and Richard S. Surwit

Perceived Control: Contingent and Noncontingent Feedback in Pulse-Rate Change and Reduction in Depressive Cognitions 277
Gary S. Stern, Joy L. Berrenberg, Donna Winn, and Philip L. Dubois

INTERVIEW
Interview with Edmund Jacobson 287
F. J. McGuigan

CASE REPORTS AND TRAINING TECHNIQUES
Biofeedback-Assisted Relaxation Training for Primary Dysmenorrhea: A Case Study 301
Thomas F. Dietvorst and David Osborne

BOOK REVIEWS 307

ANNOUNCEMENT 327

Volume 3, Number 4 **December 1978**

EDITORIAL 329

TASK FORCE REPORTS OF THE BIOFEEDBACK SOCIETY OF AMERICA
Biofeedback in the Treatment of Psychophysiologic Disorders 331
Sophia S. Fotopoulos and Whitney P. Sunderland

Biofeedback in the Treatment of Vasoconstrictive Syndromes 363
Edward Taub and Charles F. Stroebel

Biofeedback in the Treatment of Gastrointestinal Disorders 375
William E. Whitehead

Biofeedback in the Treatment of Vascular Headache 385
Seymour Diamond, Judi Diamond-Falk, and Theresa DeVeno

Biofeedback in the Treatment of Muscle-Contraction (Tension) Headache 409
Thomas Budzynski

Biofeedback in Physical Medicine and Rehabilitation 435
C. K. Fernando and J. V. Basmajian

ANNUAL INDEXES

Author Index 457

Subject Index 461

BIOFEEDBACK AND SELF-REGULATION

Volume 3, Number 1 March 1978

CONTENTS

ARTICLES

Biofeedback Training of 40-Hz EEG in Humans 1
Bruce L. Bird, Frederick A. Newton, Daniel E. Sheer, and Martin Ford

Behavioral and Electroencephalographic Correlates of 40-Hz EEG Biofeedback Training in Humans 13
Bruce L. Bird, Frederick A. Newton, Daniel E. Sheer, and Martin Ford

Discriminative Control of the Vaginal Vasomotor Response 29
Patricia K. Zingheim and Curt A. Sandman

Operant Conditioning of Skin Resistance Tonic Levels 43
Harry Kotses, Irma Rapaport, and Kathleen D. Glaus

Contingent vs. Noncontingent EMG Feedback and Hand Temperature in Relation to Anxiety and Locus of Control 51
Bruno Kappes and James Michaud

Biofeedback Modification of Frontal EMG in Normal Subjects 61
Yoshiteru Ohno, Yoshiharu Tanaka, Tsutomu Takeya, Hideki Matsubara, Norikazu Kuriya, and Sadao Komemushi

The Effects of Frontal EMG Biofeedback and Progressive Relaxation upon Hyperactivity and Its Behavioral Concomitants 69
Lendell Williams Braud

CASE REPORTS AND TRAINING TECHNIQUES

Treatment of Spastic Dysphonia by EMG Biofeedback 91
Thomas L. Henschen and Nancy G. Burton

METHODOLOGY

Baseline Levels in Muscle Relaxation Training 97
Robert A. Kinsman and Herman Staudenmayer

Biofeedback and Self-Regulation

Biofeedback and Self-Regulation is an interdisciplinary journal devoted to the rapid dissemination of information in this quickly growing field. The journal deals with relevant aspects of psychology, psychiatry, psychomatic and physical medicine, and cybernetics. The following topics lie within the journal's scope: (1) biofeedback techniques in the modification of animal and human physiological activity; (2) clinical applications of biofeedback and self-regulation techniques; (3) self-control procedures evolved from behavioral therapies; (4) child development studies as they relate to self-regulation; (5) autogenic training, progressive relaxation, and related therapies; (6) scientific studies of the alteration of consciousness. Special features of the journal include an opinion forum, a section on training techniques, and book reviews. Emphasis will be given to original experimental and theoretical research, review articles, position papers, and case studies.

Instructions to Contributors

1. Manuscripts should be submitted to
   Dr. Johann Stoyva
   Department of Psychiatry
   Box C 250
   University of Colorado Medical Center
   4200 East Ninth Avenue
   Denver, Colorado 80262
2. Type double-spaced, and submit the original and two high-quality copies (including copies of all illustrations and tables). Academic or professional affiliations of all authors and the full mailing address of the one author who will review the proofs should be included. A brief running title should appear at the top of each page.
3. An abstract of 200 words or less is to be provided.
4. Tables should be numbered and referred to by number in the text. Each table should be typed on a separate sheet of paper and should have a descriptive title.
5. Illustrations (photographs, drawings, diagrams, and charts) are to be numbered in one consecutive series of Arabic numerals, and referred to by number in the text. Photographs should be large, glossy prints, showing high contrast. Drawings should be prepared with India ink. Either the original drawings or high-quality photographic prints are acceptable. Identify figures on the back with author's name and number of the illustration. Each figure should have an accompanying caption. The list of captions for illustrations should be typed on a separate sheet of paper.
6. The 1974 revised edition of the *Publication Manual* of the American Psychological Association should be used as the style guide for the preparation of manuscripts, particularly with respect to such matters as the citing of references and the use of abbreviations, numbers, and symbols.
7. **This journal makes no page charges.** Reprints are available to authors, and order forms are sent with proofs.
8. Submission is representation that the manuscript has not been published previously and is not currently under consideration for publication elsewhere. A statement transferring copyright from the authors (or their employers, if they hold the copyright) to Plenum Publishing Corporation will be required before the manuscript can be accepted for publication. The Editor will supply the necessary forms for this transfer. Such a written transfer of copyright, which previously was assumed to be implicit in the act of submitting a manuscript, is necessary under the new U.S. Copyright Law in order for the publisher to carry through the dissemination of research results and reviews as widely and effectively as possible.